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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,857	12/09/2003	Jianhua Li	DP-308305	3533

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EXAMINER

ELLIS, SUEZU Y

ART UNIT	PAPER NUMBER
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2878

DATE MAILED: 05/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/730,857

Applicant(s)

LI ET AL.

Examiner

Suezu Ellis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 6-9, 11 and 12 is/are allowed.
- 6) ☒ Claim(s) 4, 5, 10 and 13-20 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second beams spanning across a third angle oriented perpendicular to the first angle (claims 4 and 16) must be shown or the feature canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification does not seem to support the second angle being approximately between 90° and 150° (claims 6, 12 and 18). The specification does not appear to disclose an angle greater 120°.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 5, 10, 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 4 and 16, claim language recites the second beams span across a third angle oriented perpendicular to the first angle. It is unclear how a third angle is oriented perpendicular to the first angle. Does applicant mean at the third angle is at a 90° angle from the first angle but are on the same plane, or does applicant mean the third angle is oriented on a plane that is orthogonal to that of the first angle? Please clarify. For examining purposes, claim language will be interpreted as the

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second beams span across a third angle on a plane that is orthogonal to the plane the first angle is on.

Claims 5 and 17 are unclear for similar reasons as claims 4 and 16. It is unclear if the fourth angle is oriented on a plane that is orthogonal to the plane that the second angle is on, or if the fourth angle is at a 90° difference from the second angle but on the same plane? Please clarify. For examining purposes, claim language will be interpreted as the third beams span across a fourth angle on a plane that is orthogonal to the plane of the second angle.

Claim 10 is unclear for similar reasons to that of claims 4, 16, 5 and 17. Is the third angle oriented on a plane that is orthogonal to the plane that the second angle is on or if the third angle is at a 90° difference from the second angle on the same plane? Please clarify. For examining purposes, claim language will be interpreted as the third beams span across a third angle on a plane that is orthogonal to the plane of the second angle.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 13-15 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Wallace et al. (US 6,914,526). Hereinafter, Wallace et al. will be referred to as Wallace.

With respect to claims 13, 15 and 19, Wallace discloses in Figs 10 and 11, a vehicle intrusion detection system that senses a position of an intruder (occupant) in the vehicle (driver's side or passenger's side). Wallace further discloses a passenger side intrusion module (134) that comprises an optical energy source (illuminator -140) that emits a first beam (150) of optical energy, a first optical arrangement (136 and 142) disposed in a path of the first beam wherein the first optical arrangement expands the first beam into a plurality of second beams (144, 146) spanning across a first angle, and a second optical arrangement (138, 141) disposed in the path of the second beams, wherein the second optical arrangement expands the second beams of optical energy into a plurality of third beams (148) spanning across a second angle. The fields of illumination (148, 152) from the second optical arrangement (lenses 138 and 141) are deemed equivalent to a plurality of third beams and the angle of the third beams appear greater than that of the second beams in Fig. 11. Wallace further discloses an optical energy receiver (imager - 160) that receives optical energy from the third beams that has been reflected within a passenger compartment of the motor vehicle.

With respect to claim 14, Wallace discloses the illuminator is preferably in the near infrared range (col. 3, lines 12-18).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallace.

With respect to claims 16 and 17, Wallace addresses all the limitations of claim 13, however fails to expressly disclose the second beams spanning across a third angle on a plane orthogonal to the plane of the first angle and the third beams spanning across a fourth angle on a plane perpendicular to the plane of the second angle. It is well known in the art to create multiple planes of beams in order to increase the monitoring area. It would have been obvious to modify the angles of the beams in order to increase the coverage area of the illuminated field of view.

With respect to claim 18, Wallace addresses all the limitations of claim 13, however fails to expressly disclose the second angle is approximately between 90 and 150. However, discovering the optimum or working ranges involves only routine skill in the art. It would have been obvious to a person of ordinary skill in the art to modify the angle in order to create a desired illumination field of view depending on the configuration and/or location of the passenger side intrusion module.

With respect to claim 20, Wallace addresses all the limitations of claim 13, however fails to expressly disclose the first angle being coplanar with the second angle. However, the illuminated field of view (148) of Fig. 8 appears to be planar across the

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right side of the vehicle. Nevertheless, it would have been obvious to a person of ordinary skill in the art to have the first angle be coplanar with the second angle in order to increase precision of the illuminated field of view.

Allowable Subject Matter

Claims 1-3, 6-9, 11 and 12 are allowed.

Claims 4, 5 and 10 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

With respect to claim 1, prior art fails to teach or reasonably suggest an automotive occupant position restraint apparatus comprising a diffractive element disposed in a path of a first beam to expand the first beam into a plurality of second beams spanning across a first angle and a lens arrangement disposed in a path of the second beams wherein the lens arrangement expands the second beams into a plurality of third beams spanning across a second angle that is larger than the first angle, in addition to the other limitations of the claim,

With respect to claim 7, prior art fails to teach or reasonably suggest an automotive occupant position restraint apparatus comprising a beam splitting device disposed in a path of a first beam to expand the first beam into a plurality of second beams spanning across a first angle and at least one diffractive element disposed in a path of the second beams wherein the lens arrangement expands the second beams

into a plurality of third beams spanning across a second angle that is larger than the first angle, in addition to the other limitations of the claim.

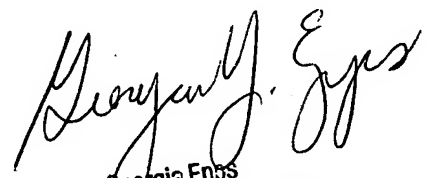
Claims not specifically addressed are/would be allowable due to their dependency.

Telephone/Fax Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suez Ellis whose telephone number is (571) 272-2868. The examiner can normally be reached on 8:30am-5pm (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Georgia Epps
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